In a recently released issue of *Pediatrics* (10.1542/peds.2017-0216), Dr. Kamini Raghuram and colleagues examined the question of whether head growth in premature infants of gestational age <29 weeks is associated with neurodevelopmental outcome. The short answer is yes, but the longer answer is very interesting. The authors were able to access records for VLBW infants (very low birth weight, less than 1500 grams at birth) throughout Canada via both the Canadian Neonatal Network and the Canadian Neonatal Follow-up Network, yielding a sample size that is enviably large and supports their ability to make meaningful conclusions. It is interesting that nutrition, degree of illness and MRI findings appeared to be important determining factors for head growth, but could not explain all findings. This suggests the possibility that head growth may be a marker for other medical, biological or developmental issues.

While Dr. Kamini Raghuram and colleagues were able to follow up their cohort of premature infants through the second year of life, we do have a couple of remarkable studies that suggest that early head growth continues to predict neurodevelopment and even school performance much later on. Dr. Maureen Hack and colleagues reported that among 249 VLBW infants, those 33 who had abnormally small head circumference at 8 months, as compared to the 216 whose head circumference was normal at this age, had significantly higher rates of neurologic impairment (21% vs. 8%) and lower IQ scores (mean verbal, 84 vs. 98) at age 8 years.\(^1\) Even after multivariate analysis correcting for head size at birth and demographic and neonatal factors, subnormal head circumference at 8 months had an independent adverse impact on both IQ and academic achievement. In a study almost a decade later, Dr. Hack and colleagues compared developmental outcomes at age 6.8 years of 128 VLBW children born from 1982-1986 and 58 normal birth weight controls.\(^2\) Thirty one (24%) of the VLBW children had an abnormal head circumference compared to none of the full term normal birth weight controls. Again, even after correction for neonatal risk, small for gestational age status, demographic measures and birth weight, those former VLBW infants with subnormal head circumference had "poorer IQ equivalent, perceptual motor skills, academic achievement, and adaptive behavior."

Subnormal head circumference appears to be a clinically meaningful marker among former VLBW infants for both early neurodevelopmental issues, as well as likely for school and cognitive problems later on. While optimizing nutrition and developmental stimulation are certainly critical considerations for care of VLBW NICU graduates, we may have to recognize that a subnormal head circumference early on is a "hard stop" predictor of impending challenges at school age. As primary care pediatricians we can and should use this information not to frighten parents but to realistically remain on high alert for developmental and cognitive problems in a subgroup of former VLBW infants who will benefit from early identification and specialized programming.